

# BUFFALO

“BEST BUILT”

# HOUSE PUMPS

CIRCULAR No. 235

BUFFALO STEAM PUMP COMPANY

BUFFALO, N. Y., U. S. A.

Manufacturers of Steam, Power and Centrifugal  
Pumping Machinery, Vacuum Pumps and Con-  
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## Buffalo Single-Suction Class "O" Pumps

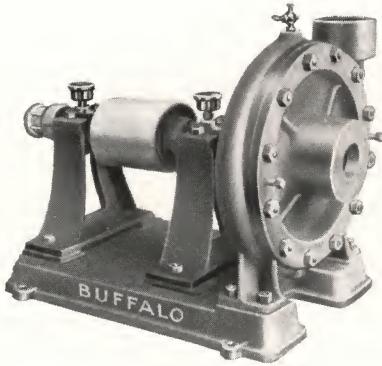


Fig. 942  
Sizes, 1 and 1 1/2 inch, pulley driven



Fig. 943  
Sizes, 2 to 3 inch, pulley driven

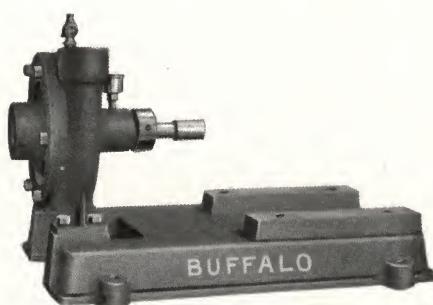


Fig. 944  
1 and 1 1/2 inch, direct connected

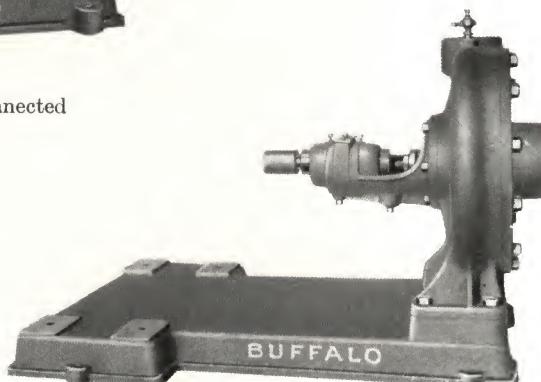


Fig. 945  
2 to 3 inch, direct connected



# Buffalo Single-Suction Class "O" Pumps

## Shells Good for 100 Feet Pressure

### SPECIFICATIONS

Shell and Side-Plate	Heavy grey cast iron, machined to gauge, drilling to template. Close clearances with runner preventing leakage.
Runner	Brass, enclosed type, highly polished, finished all over to template. Iron runner furnished on special order, same price.
Shaft	Open hearth machine steel, accurately finished. All rotating parts assembled on shaft and balanced before putting in pump.
Bearings	Babbitted, for grease lubrication on 1 and 1½-inch pulley pumps, and on 1 and 1½-inch direct-connected pumps. Ring-oiling, removable babbitted liners on 2-inch and larger pulley and direct-connected pumps.
Glands	On 1 and 1½-inch, brass; on other sizes cast iron, allowing ample packing space.
Oil Cups, etc.	Furnished.
Finish	All pumps thoroughly coated inside with anti-rust paint before assembly, and painted, filled and rubbed down outside, with final finishing coat. Bright parts exposed to weather protected by slushing compound during shipment.
Special Pumps	Built of any metal to suit specifications of customer.

### HORIZONTAL PATTERNS

Size Pump	Pipe Sizes		Ordinary Range of Capacity Galls. per Minute		Diam. x Face Pulley	Length x Width	Weight Pulley Pump	Code Words	
	Suction	Discharge	Normal	Maximum				Pump	With Motor Base
1 ½	1 ½	2	1 ½	25	35	3 x 3 4 x 4	17 x 12 19 x 14	...	Mkhyz Mkigm Mkimv

This list similar to Figs. 942 and 944. Speeds on last page.  
Standard Shells designed for 100 ft. or 43 pounds pressure.

1 ½	2	2 ½	3	100	135	5 x 5	22 x 15	...	Mkihn	Mkind
2 ½	3	2 ½	4	155	210	6 x 5	27 x 18	...	Mkipj	Mkipk
3		3		225	300	7 x 6	29 x 26	...	Mkikt	Mkirk

All these pumps regularly furnished with enclosed type polished brass runners—though if desired iron runners will be furnished—No Deduction Allowance.

Standard pumps are built "right hand" vertical up discharge for rotation in counter-clockwise direction when looking into suction inlet. An *additional price of 5%* of price of pulley-driven pump is charged for opposite direction of rotation or for special position of discharge outlet.

Owing to economy of metal very low prices on these pumps of ALL BRASS construction can be quoted. They are recommended for handling salt brine, etc.



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## Buffalo Compound Pumps

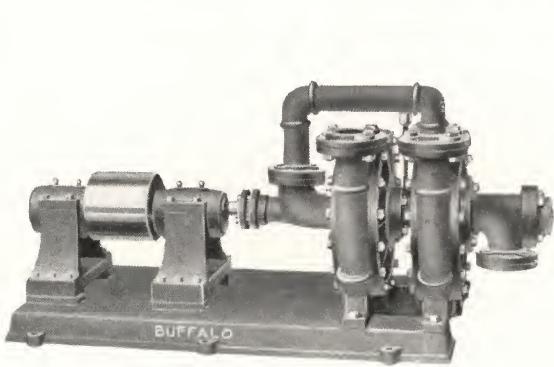


Fig. 955  
Belted Compound Pump  
With ring-oiling bearings



Fig. 957  
Compound Pump  
Arranged to use as a sinker

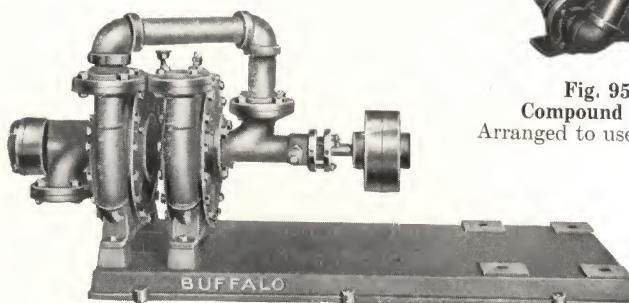


Fig. 956  
Compound Centrifugal Pump  
For direct connection to motor

Size	Normal Capacity G. P. M.	Speed	R. P. M. for Total Heads of 50-160 Feet										Extra Heavy Construction Req'd at Additional Price			
			50'	60'	70'	80'	90'	100'	120'	140'	16 0	180'	200'	220'	240'	
1"	25	{ Std. Max.	1180 2280	1290 2480	1400 2680	1480 2870	1580 3060	1660 3200	1820 3200	1970 3200	2110 3200	2240 3200	2360 3200	2480 3200	2600 3200	
1 1/2"	55	{ Std. Max.	1180 2280	1290 2480	1400 2680	1480 2870	1580 3060	1660 3200	1820 3200	1970 3200	2110 3200	2240 3200	2360 3200	2480 3200	2600 3200	
2"	100	{ Std. Max.	1050 1830	1140 2020	1220 2180	1300 2360	1370 2500	1440 2640	1570 2900	1680 3100	1800 3100	1900 3100	1990 3100	2080 3100	2160 3100	
2 1/2"	155	{ Std. Max.	900 1720	980 1880	1050 2020	1100 2170	1170 2300	1220 2400	1340 2650	1440 2860	1530 3000	1610 3000	1700 3000	1770 3000	1840 3000	
3"	225	{ Std. Max.	670 1720	720 1880	780 2020	820 2170	870 2300	920 2400	1000 2600	1080 2700	1160 2800	1220 2850	1290 2900	1350 2900	1410 2900	

Std. Speed is Belted Speed. To suit standard motors.

For Motor Drive use any speed between Std. Speed and Max. Speed



## Buffalo Compound Pumps

There are many cases where the motor speed is limited, and yet the head being under 150 or 200 feet and the water quantity desired is small a Buffalo Compound Pump must be used instead of one of the regular single-stage patterns. These machines find wide use for tank service, for handling circulating water, oil, and in vertical patterns particularly have we built a great many; all of which have given the very best service.

In many buildings where the city water pressure will not force water supply to the few upper floors these pumps are used with complete success, usually being automatically-controlled electric-driven installations, the operation being governed by a float in a tank on the roof or upper floor. It is possible also to control the pump by means of a pressure type switch which will shut off the motor when the pressure in air tank or in the vertical riser pipe has reached a predetermined amount for which the apparatus may be set.

Inquiries for electric-driven units should state fully all details of arrangement desired and give particulars as to the nature and voltage of the electric current available to operate the motor.

### HORIZONTAL PATTERNS—BUILT ALSO IN VERTICAL PATTERNS

Size Pump	Pipe Sizes		Ordinary Range of Capacity Galls. per Minute		Diam. x Face Pulley	Length x Width	Weight Pulley Pump	Code Words	
	Suction	Discharge	Normal	Maximum				Pulley Pump	With Motor Base and Flanged Coupling

This list similar to Figs. 955 and 956.

Standard Shells designed for 150 ft. or 65 pounds—Special Shells for higher pressures.

1	1 1/2	1	25	35	5 x 5	43 x 18	....	Mkjat	Mkjyb
1 1/2	2	1 1/2	55	75	5 x 5	43 x 18	....	Mkjev	Mklaw
2	2 1/2	2	100	135	6 x 5	54 x 23	....	Mkjia	Mklex
2 1/2	3	2 1/2	155	210	7 x 6	54 x 23	....	Mkjox	Mkliz
3	4	3	225	300	7 x 6	60 x 25	....	Mkjuz	Mklob

All these pumps regularly furnished with enclosed type brass runners—though if desired iron runners will be furnished—(No Deduction Allowance), and ball-bearing thrusts are furnished ordinarily.

Unless otherwise specified these pumps will be furnished "right hand" or for rotation in counter-clockwise direction looking into runner inlet of first stage, and up discharge. For other direction of rotation or special position of discharge add 5% of price of pulley pump.



## Buffalo Automatic Sump Pumps, Bilge or Sewage Ejectors



Fig. 1105

Furnished with round or square sump pit covers, see table on opposite page

Never use smaller than 4-inch pump where sewage with solid matter is expected to be handled.



# Buffalo Automatic Sump Pumps, Bilge or Sewage Ejectors

The success which has attended the operation of the hundreds of pumps of this type illustrated on the opposite page is the very best recommendation the Buffalo Automatic Sump Pump could have.

To point out the difference between our pump and some of the cheaper, but less successful outfits, intended to perform similar work, we call attention to the following:

1. A self-contained outfit which on arrival needs only to be uncrated, connections to the automatic starter and motor made, and the unit is ready for operation.
2. Shaft is entirely enclosed and *really is* protected from action of sump water and possibility of fouling from waste or stringy matter flowing into sump pit.
3. Ball-bearing thrust is provided to carry weight of moving parts, lower ball race resting on spherical seat to permit it to adjust to conditions of alignment.
4. Oil—NOT GREASE—is used to lubricate this thrust. For intermittent operation at high speed nothing could be a poorer lubricant than grease, which is thrown away from the bearing surfaces by the rapid rotation and, owing to the fact that the pump operates for only a few minutes at a time to empty the sump, the grease does not get warmed up and become fluid enough to flow to the bearing surfaces.
5. Oil lubricant is supplied to the ball-bearing thrust automatically in a continuous flood while pump is in operation. Full description of design on page 62.
6. Stuffing-box and gland around shaft at cover plate prevent any steam, gases or foul odors rising into room, if edge of cover plate be caulked tight.
7. All parts of outfit easily accessible.

In sending inquiry state whether standard depth of 4 foot sump pit will be used, the total head against which the pump will operate, and what electric current is available to operate motor.

We are also pleased to quote on standard or special cast-iron pits with one or more inlets. Send sketch.

Maximum Gallons per Minute	Feet Total Operating Head	Code Word Pump Without Electrical Equipment	Code Words, Including Motor and Starter, Float, etc., for Various Currents not Including Cast-Iron Sump Pit. Pumps Designed for Standard Sump Pit 4 Feet Deep, with Cover Plates 3 Feet Diameter or 3 Feet Square.						
			110-Volt Direct Current	220-Volt Direct Current	550-Volt Direct Current	115-Volt or 230-Volt Single Phase 60-Cycle Alternating	440-Volt Single Phase 60-Cycle Alternating	100, 200 or 400-Volt 2 or 3 Phase 60-Cycle Alternating	100, 200 or 400-Volt 2 or 3 Phase 25 Cycle
60 (1 $\frac{1}{2}$ inch disch'g)	10 15 20	<i>Mrtal</i> <i>Mrtew</i> <i>Mrtin</i>	<i>Mrwos</i> <i>Mrwut</i> <i>Mrwv</i>	<i>Msbat</i> <i>Msbev</i> <i>Msbta</i>	<i>Msfoc</i> <i>Msfud</i> <i>Msfyf</i>	<i>Mskad</i> <i>Mskef</i> <i>Mskig</i>	<i>Msmok</i> <i>Msmul</i> <i>Msmym</i>	<i>Msvan</i> <i>Msvp</i> <i>Msvr</i>	<i>Mszov</i> <i>Mszua</i> <i>Mszyx</i>
125 (2 inch disch'g)	10 15 20	<i>Mrtop</i> <i>Mrtur</i> <i>Mrtys</i>	<i>Mrzap</i> <i>Mrxer</i> <i>Mrxis</i>	<i>Msbax</i> <i>Msbuz</i> <i>Msbyb</i>	<i>Msgaz</i> <i>Msgeb</i> <i>Msgic</i>	<i>Mskoh</i> <i>Mskuj</i> <i>Mskyk</i>	<i>Msnah</i> <i>Msnaj</i> <i>Msnik</i>	<i>Msvos</i> <i>Msvut</i> <i>Msvyv</i>	<i>Mtafs</i> <i>Mtagt</i> <i>Mtahv</i>
200 (2 $\frac{1}{2}$ inch disch'g)	10 15 20	<i>Mrvam</i> <i>Mrvan</i> <i>Mrvip</i>	<i>Mrzot</i> <i>Mrzuv</i> <i>Mryza</i>	<i>Msdaw</i> <i>Msdex</i> <i>Msdiz</i>	<i>Msgod</i> <i>Msguf</i> <i>Msgyg</i>	<i>Mslaf</i> <i>Mslug</i> <i>Mstih</i>	<i>Msnol</i> <i>Msnun</i> <i>Msnyn</i>	<i>Mswap</i> <i>Mswer</i> <i>Mswis</i>	<i>Mtakd</i> <i>Mtalz</i> <i>Mtans</i>
275 (3 inch disch'g)	10 20	<i>Mrvor</i> <i>Mrvus</i> <i>Mrvyt</i>	<i>Msbat</i> <i>Msbev</i> <i>Msbta</i>	<i>Msdob</i> <i>Msduc</i> <i>Msdyd</i>	<i>Msjac</i> <i>Msjed</i> <i>Msjif</i>	<i>Msloj</i> <i>Mstuk</i> <i>Mstyl</i>	<i>Mstam</i> <i>Msten</i> <i>Mstip</i>	<i>Mswot</i> <i>Mswuv</i> <i>Mswya</i>	<i>Mtarg</i> <i>Mtash</i> <i>Mtavk</i>
500 (4 inch disch'g)	10 15 20	<i>Mrwan</i> <i>Mrwep</i> <i>Mrwir</i>	<i>Msbax</i> <i>Msbuz</i> <i>Msbyb</i>	<i>Msfax</i> <i>Msfaz</i> <i>Msfib</i>	<i>Msjog</i> <i>Msjuh</i> <i>Msjuj</i>	<i>Msmag</i> <i>Msmeh</i> <i>Msmij</i>	<i>Mstor</i> <i>Mstus</i> <i>Mstyf</i>	<i>Msxar</i> <i>Mxes</i> <i>Mxit</i>	<i>Mtazp</i> <i>Mtbav</i> <i>Mtbew</i>

Larger size pumps, or for deeper sump pits, for higher heads or with special size covers, quoted on request



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## Buffalo Class "K" Triplex Pumps

SINGLE ACTING

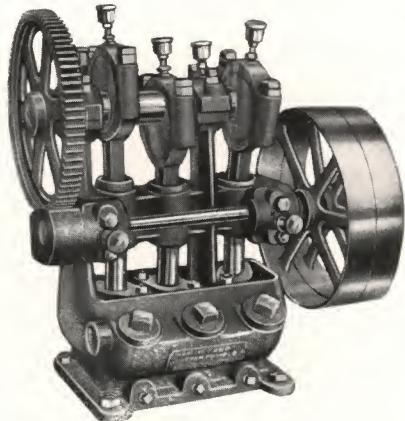


Fig. 415

Size,  $1\frac{1}{4}$  x 2

Valve Chest and Frame in one casting.

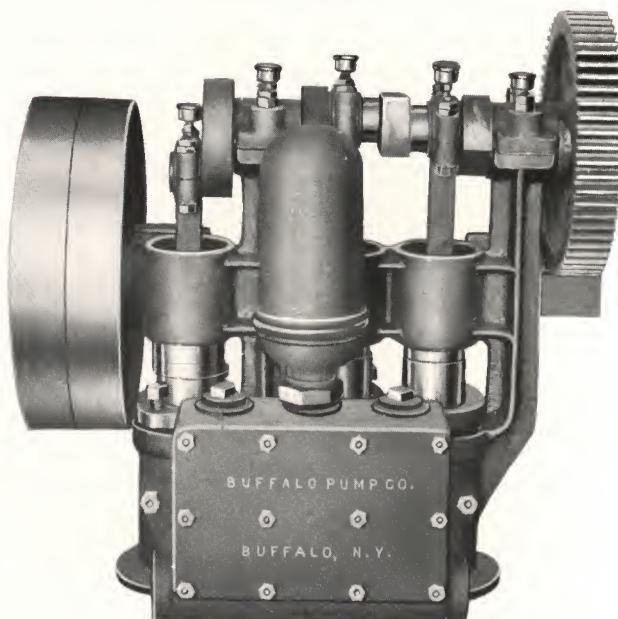


Fig. 416

Size, 4 x 4

Air Chamber regularly furnished for Discharge.



# Buffalo Class "K" Triplex Pumps

SINGLE ACTING

For General Water Supply, Boiler Feeding, Tank Work,  
Mine Pumping, Etc.

## SPECIFICATIONS

Frame	Close-grained iron cast in one piece with crosshead guides and cylinders, insuring perfect alignment of all working parts.
Crankshaft	Open hearth steel casting in one piece. Forged steel shafts furnished on special order.
Bearings	Crankshaft and pinion shaft bearings are very large and are babbited, peened and scraped.
Gearing	Gear and pinion charcoal iron cut from the solid. Pinion covered by gear guard.
Crossheads	Are cylindrical in form, one piece with plunger and run in bored guides. Crosshead pin is of steel, under oil.
Connecting Rods	Of cast steel, have adjustable babbitted boxes, marine type, at crank end, and bronze bushings at crosshead end.
Cylinders	Close-grained iron cast in one piece with frame carrying bearings and crosshead guides. Raised edge around top of cylinders catches all drip.
Plungers	Hard cast iron, except in size $1\frac{1}{4}$ " x 2", which has bronze plungers.
Glands	Cast iron, allowing ample packing space.
Valve Chest	In one casting with large area, no air pockets, direct water ways and easy access.
Valves	For regular fitted pumps for cold water, medium rubber discs on bronze grid seats with cylindrical brass springs. For brass fitted pumps for hot water, hard rubber disc valves are furnished. Brass disc valves furnished with either regular or brass fitted pumps on special order at same price. All pumps Fig. 415 have brass wing valves and driven brass seats.
Air Chamber	Supplied with Fig. 416. Supplied with Fig. 415 at small extra charge. Vacuum chamber to order.
Oil Cups and Special Wrenches	Supplied with pump.
Special	Bronze Plungers, Bronze-Lined Cylinders and Glands, Cast-Steel Gearings, Rawhide Pinions, etc., to order.

Diameter Plungers	Stroke	Gallons per Revolution	Revolutions per Minute	Gallons per Minute	Max. Working Pressure Lbs.	Suction	Discharge	Gear Ratio To 1	Tight and Loose Pulleys	Code Word Regular	Code Word With Motor Base and Gears
$1\frac{1}{4}$	2	.033	60	1.9	200	1	$\frac{3}{4}$	5	$12 \times 1\frac{1}{2}$	<i>Lgabs</i>	<i>Lgask</i>

This list similar to Fig. 415.

$1\frac{1}{4}$	2	.033	60	1.9	200	1	$\frac{3}{4}$	5	$12 \times 1\frac{1}{2}$	<i>Lgabs</i>	<i>Lgask</i>
$2\frac{1}{4}$	3	.12	60	7.4	150	$1\frac{1}{2}$	1	5	$12 \times 3$	<i>Lgagh</i>	<i>Lgavz</i>
$2\frac{1}{4}$	3	.15	60	9.3	110	$1\frac{1}{2}$	1	5	$12 \times 3$	<i>Lgajd</i>	<i>Lgbah</i>
$2\frac{1}{4}$	4	.21	60	12.4	150	2	$1\frac{1}{2}$	5	$16 \times 3$	<i>Lgalm</i>	<i>Lgbel</i>
$2\frac{1}{2}$	4	.25	60	15.3	110	2	$1\frac{1}{2}$	5	$16 \times 3$	<i>Lgamg</i>	<i>Lgbik</i>
3	4	.36	60	21.9	87	2	$1\frac{1}{2}$	5	$16 \times 3$	<i>Lgant</i>	<i>Lgbol</i>
$3\frac{1}{2}$	4	.50	60	30.1	150	$2\frac{1}{2}$	2	4	$20 \times 3$	<i>Lgapf</i>	<i>Lgbun</i>
4	4	.65	60	39.2	110	$2\frac{1}{2}$	2	4	$20 \times 3$	<i>Lgarf</i>	<i>Lgbyn</i>

Add Code Word "Jckat" for Brass Fitted.



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## Buffalo Class "K" Triplex Pumps

SINGLE ACTING



Fig. 420

Size, 4 x 6



# Buffalo Class "K" Triplex Pumps

## SINGLE ACTING

For General Water Supply, Boiler Feeding, House Pumps, Mine Pumping, Etc.

### SPECIFICATIONS

Frame	Close-grained iron cast in one piece with crosshead guides and cylinders, insuring perfect alignment of all working parts.										
Crankshaft	Open hearth steel casting in one piece. Forged steel shafts furnished on special order.										
Bearings	Crankshaft and pinion shaft bearings are very large and are babbitted, peined and scraped.										
Gearing	Gear and pinion charcoal iron cut from the solid. Pinion covered by gear guard.										
Crossheads	Fitted with adjustable babbitted shoes which run in bored guides. Crosshead pin of steel, under oil.										
Connecting Rods	Open hearth steel castings with large babbitted boxes, marine type, at crank end with bronze bushings at crosshead end.										
Cylinders	Close-grained iron cast in one piece with frame carrying bearings and crosshead guides. Raised edge around top of cylinders catches all drip.										
Plungers	Hard cast iron. Bronze plungers furnished on special order.										
Glands	Cast iron, allowing ample packing space.										
Valve Chest	In one casting with large valve area, no air pockets, direct water ways and easy access.										
Valves	For regular fitted pumps for cold water, medium rubber discs on bronze grid seats with cylindrical brass springs. For brass fitted pumps, for hot water, hard rubber disc valves are furnished. Brass disc valves furnished for either regular or brass fitted pumps on special order at same price.										
Air Chamber	Supplied with pump. Vacuum Chamber to order.										
Oil Cups and Special Wrenches	Supplied with pump.										
Special	Bronze Plungers, Bronze-Lined Cylinders and Glands, Cast-Steel Gear-ing, Rawhide Pinions, etc., to order.										

Diameter Plungers	Stroke	Gallons per Revolution	Revolutions per Minute	Gallons per Minute	Max. Working Pressure Lbs.	Suction	Discharge	Gear Ratio —To 1	Tight and Loose Pulleys	Code Word	Code Word With Motor Base and Gears
3 1/2	6	.74	55	41	150	3	2 1/2	5	20 x 4	Lgcaj	Lgdak
4	6	.98	55	54	110	3	2 1/2	5	20 x 4	Lgcek	Lgdel
4	6	.98	55	54	150	3	2 1/2	5	24 x 5	Lgcil	Lgdim
4 1/2	6	1.2	55	68	110	3	2 1/2	5	24 x 5	Lgcom	Lgdon
5	6	1.5	55	84	87	4	3	5	24 x 5	Lgcun	Lgdup
5 1/2	6	1.8	55	102	75	4	3	5	24 x 5	Lgcyp	Lgydr

This list similar to Fig. 420.

3 1/2	6	.74	55	41	150	3	2 1/2	5	20 x 4	Lgcaj	Lgdak
4	6	.98	55	54	110	3	2 1/2	5	20 x 4	Lgcek	Lgdel
4	6	.98	55	54	150	3	2 1/2	5	24 x 5	Lgcil	Lgdim
4 1/2	6	1.2	55	68	110	3	2 1/2	5	24 x 5	Lgcom	Lgdon
5	6	1.5	55	84	87	4	3	5	24 x 5	Lgcun	Lgdup
5 1/2	6	1.8	55	102	75	4	3	5	24 x 5	Lgcyp	Lgydr

Add Code Word "Jckat" for Brass Fitted.



B U F F A L O   P U M P S



## Buffalo Triplex Pumps

SINGLE ACTING

WITHOUT GEARS

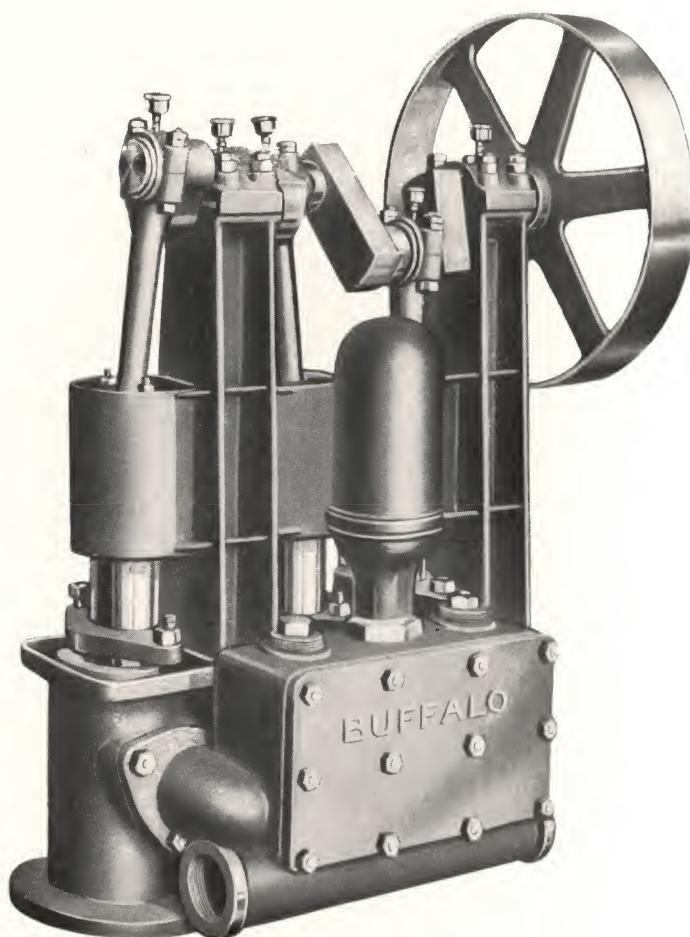


Fig. 475

Size, 4 x 6



## Buffalo Triplex Pumps

### SINGLE ACTING

### WITHOUT GEARS

The specifications of these pumps are practically the same as those with gears—the only difference being that large tight and loose pulleys are mounted directly on the extended crankshaft. This necessitates the use of a comparatively low-speed motor.

There are many cases, as in apartment houses, office buildings, hospitals and asylums, where the slight noise consequent in the operation of gears is objectionable, and where the water pressure and motor speed permit the use of a pump without gears as illustrated on the opposite page.

As the pulley is mounted directly on the extended crankshaft the pinion shaft and gears are done away with entirely.

Inquiries should state full details of water pressure (and pressure on suction if any), and horsepower, speed and size of pulley on motor available for operating the pump, or it may be left to our Engineering Department to make recommendations. In this case state voltage of electric current to be used and if alternating current the phase, and cycles as well.

Many installations of these pumps for house service include automatic control of the electric motor driving the pump so that the unit requires only the attention of an attendant a few minutes daily to fill grease cups, etc.

Diameter Plungers	Stroke	Gallons per Revolution	Revolutions per Minute	Gallons per Minute	Max. Working Pressure Lbs.	Suction	Discharge	Pulley for 50 Pounds Pressure	Pulley for 90 Pounds Pressure	Code Word Regular Fitted
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This list similar to Fig. 475.

Rated "Working Pressure" represents rated strength of Power Frame.

2 $\frac{1}{4}$	4	.21	60	12.4	150	2	1 $\frac{1}{2}$	16 x 3	20 x 3	Lgrax
2 $\frac{1}{2}$	4	.25	60	15.3	110	2	1 $\frac{1}{2}$	16 x 3	20 x 3	Lgrez
3	4	.36	60	21.9	87	2	1 $\frac{1}{2}$	20 x 3	24 x 5	Lgrib
3 $\frac{1}{2}$	4	.50	60	30.1	150	2 $\frac{1}{2}$	2	20 x 4	24 x 5	Lgrud
4	4	.65	60	39.2	110	2 $\frac{1}{2}$	2	20 x 4	24 x 5	Lgruf
3 $\frac{1}{2}$	6	.74	55	41	150	3	2 $\frac{1}{2}$	36 x 6 $\frac{1}{2}$	40 x 6 $\frac{1}{2}$	Lgsaz
4	6	.98	55	54	110	3	2 $\frac{1}{2}$	36 x 6 $\frac{1}{2}$	40 x 6 $\frac{1}{2}$	Lgsab
4 $\frac{1}{2}$	6	1.2	55	68	110	3	2 $\frac{1}{2}$	36 x 6 $\frac{1}{2}$	40 x 6 $\frac{1}{2}$	Lgsic
5	6	1.5	55	84	87	4	3	36 x 6 $\frac{1}{2}$	40 x 6 $\frac{1}{2}$	Lgsod
5 $\frac{1}{2}$	6	1.8	55	102	75	4	3	36 x 6 $\frac{1}{2}$	40 x 6 $\frac{1}{2}$	Lgsuf

Correspondence solicited regarding larger sizes. Inquiries should state water pressure and speed with pulley size on driving motor or line shaft.

Add Code Word "Jckat" for Brass Fitted.



B U F F A L O   P U M P S



## Buffalo Triplex Automatic House Pumps

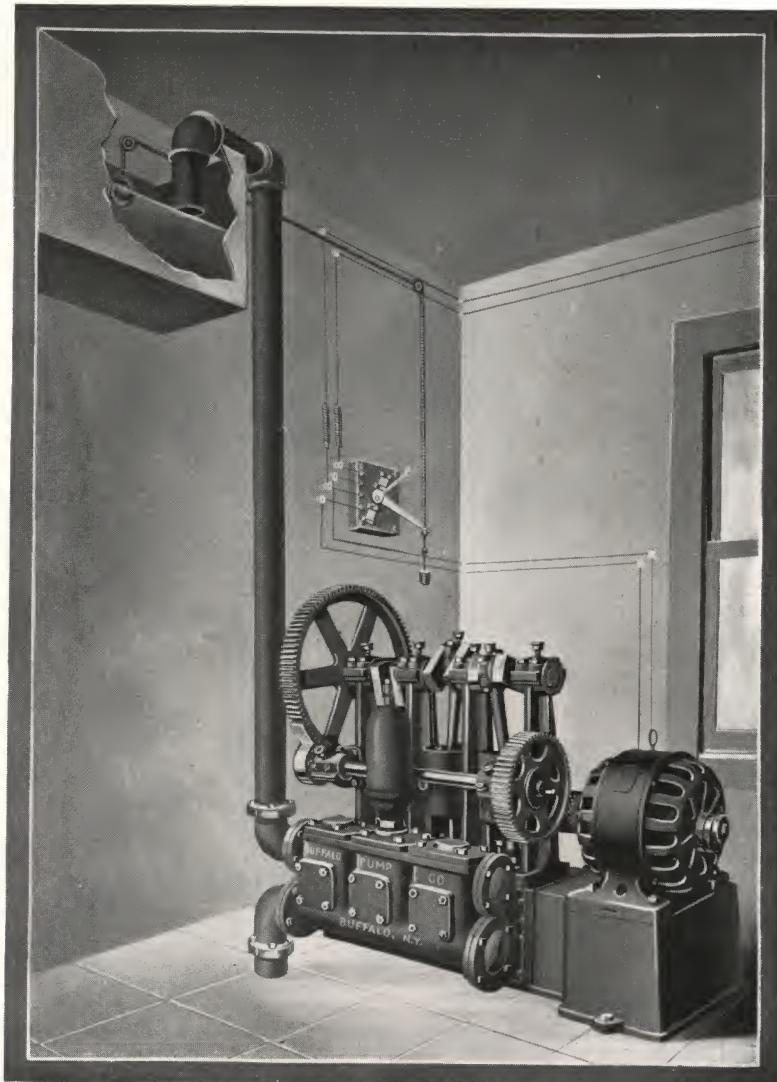


Fig. 480



## Buffalo Triplex Pumps

### FORMS OF DRIVE

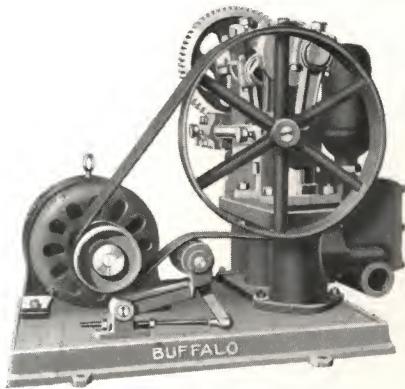


Fig. 486  
With Idler Pulley  
Code word, *Jclfp*

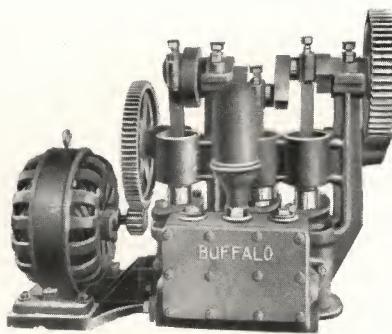


Fig. 481  
For Class "K" Pumps  
Code Word, *Jclht*  
Rawhide Pinion for motor shaft is furnished



Fig. 487  
Silent Chain Drive  
Code word, *Jclfs*



# B U F F A L O   P U M P S



## Speed Table for Single-Suction Class "O" Pumps

(Listed on page 2)

NOTES.—With reference to all speed tables:

"STD. SPEED"—Speed for belted pumps discharging normal capacity of pump.

"MAX. SPEED"—For direct-connected units, any speed (to suit standard motors) may be chosen between STANDARD SPEED and MAXIMUM SPEED.

SPECIAL SPEEDS—Can be furnished at special prices. Write us, giving all data.

SPEEDS FOR LARGER CAPACITIES—Than "Normal Capacity" as given in the tables herewith will be furnished on request. It will be understood that increasing the running speed will increase volume of water delivered at any given head.

Size	Normal Cap. G.P.M.	Speed	R. P. M. FOR TOTAL HEADS OF 5-100 FEET.														
			5'	10'	15'	20'	25'	30'	35'	40'	45'	50'	60'	70'	80'	90'	100'
1"	25 {	Std.	900	1200	1420	1620	1800	1950	2100	2250	2400	2520	2780	3000	3200	3350	
		Max.	1500	2000	2500	3000	3300	3500	3500	3500	3500	3500	3500	3500	3500	3500	
1 1/2"	55 {	Std.	600	800	930	1060	1180	1290	1400	1480	1580	1660	1820	1970	2110	2240	2360
		Max.	1100	1450	1800	2050	2280	2480	2680	2870	3060	3200	3200	3200	3200	3200	
2"	100 {	Std.	500	700	830	950	1050	1140	1220	1300	1370	1440	1570	1680	1800	1900	1990
		Max.	900	1200	1420	1640	1830	2020	2180	2360	2500	2640	2900	3100	3100	3100	
2 1/2"	155 {	Std.	460	600	720	810	900	980	1050	1100	1170	1220	1340	1440	1530	1610	1700
		Max.	800	1100	1300	1520	1720	1880	2020	2170	2300	2400	2650	2860	3000	3000	
3"	225 {	Std.	440	480	550	610	670	720	780	820	870	920	1000	1080	1160	1220	1290
		Max.	800	1100	1300	1520	1720	1880	2020	2170	2300	2400	2600	2700	2800	2850	2900

## Table of Power Required to Operate Buffalo Single-Acting Triplex Pumps

Brake horsepower statements in the table contain a liberal margin. Closer guarantees can be made on receipt of full statement of details. The brake (or actual) horsepower for other capacities and heads is approximately proportional to that tabulated. The total working "head" of pump consists of suction lift plus discharge lift (or pressure) plus pipe friction (for which see table on another page).

Buffalo Pumps handle *more* water than other pumps of the same size. Because of their rigid design and accurate construction higher crankshaft speeds may be used.

Size	Full Rated Capacity Gallons Per Minute	ACTUAL BRAKE HORSEPOWER REQUIRED TO OPERATE PUMP									
		50 Feet Head or 21 Pounds	100 Feet Head or 43 Pounds	150 Feet Head or 65 Pounds	200 Feet Head or 87 Pounds	250 Feet Head or 108 Pounds	300 Feet Head or 130 Pounds	350 Feet Head or 150 Pounds	405 Feet Head or 175 Pounds	460 Feet Head or 200 Pounds	
		.50	.50	.50	.50	.50	.50	.50	.56	.65	.74
1 1/4 x 2	1.9	.50	.50	.50	.50	.50	.50	.50	.56	.65	.74
2 x 3	7.4	.50	.62	.94	1.25	1.55	1.88	2.18	2.35	2.46	
2 1/4 x 3	9.3	.50	.78	1.18	1.34	1.68	2.02	2.35	2.71	3.1	
2 1/2 x 4	12.4	.63	1.04	1.35	1.57	1.95	2.35	2.74	2.95	3.2	
2 1/2 x 4	15.3	.75	1.2	1.65	1.84	2.25	2.58	3.0	3.27	3.42	
3 x 4	21.9	.89	1.32	1.93	2.35	2.95	3.32	3.9	4.25	4.55	
3 1/2 x 4	30.1	1.0	1.5	2.15	2.67	3.2	3.7	4.3	4.75	5.4	
4 x 4	39.2	1.4	1.8	2.45	3.0	3.65	4.4	5.1	5.75	6.5	
3 1/2 x 6	41	1.5	1.9	2.5	3.1	3.8	4.5	5.25	6.0	6.8	
4 x 6	54	1.9	2.5	3.3	4.0	5.0	5.95	6.9	7.9	9.0	
4 1/2 x 6	68	2.0	3.1	3.8	4.75	6.0	7.2	8.6	9.9	11.3	
5 x 6	84	2.2	3.9	4.5	5.6	7.0	8.4	10.6	12.3	14.0	
5 1/2 x 6	102	2.7	4.6	5.5	6.8	8.5	10.2	12.9	14.9	17.0	